

What is claimed is:

1. A method for playing an audio track during video trick mode playback of a video presentation, the method comprising:
 - reading [a coded] digital data from a storage medium, said [coded] digital data representing audio programming corresponding to the video presentation;
 - decoding a plurality of digital audio samples corresponding to a selected portion of the video presentation from a portion of said read digital data;
 - transforming said digital audio samples from time domain to corresponding frequency domain audio samples; and
 - scaling a playback audio frequency of said frequency domain audio samples in accordance with said trick mode playback.
2. The method according to claim 1, further comprising:
 - dropping selected ones of said time domain audio samples at a rate approximately corresponding to a selected trick mode video playback speed of said video presentation; and
 - generating an audio playback signal corresponding only to a remaining set of said audio samples.
3. The method according to claim 2, wherein said time domain audio samples are dropped at an average rate of every $(n-1)$ of every n samples, where n is equal to the selected trick mode playback speed relative to a normal playback speed..
4. The method according to claim 3, wherein said scaling step further comprises scaling said playback audio frequency by a factor of approximately $1/n$.
5. The method according to claim 4, wherein said scaling step further comprises scaling an amplitude of said frequency domain audio samples by factor of approximately $1/n$.

6. The method according to claim 1, wherein said scaling step further comprises transforming said scaled frequency domain audio samples to corresponding time domain digital audio samples.

7. The method according to claim 1, further comprising:
repeating selected ones of said time domain audio samples at a rate inversely proportional to a selected trick mode video playback speed of said video presentation to produce a trick mode set of audio samples; and,
generating an audio playback signal corresponding to said trick mode set of said audio samples.

8. The method according to claim 7, wherein said time domain audio samples are repeated at an average rate of about $1/n$ times, where n is equal to the selected trick mode playback speed relative to a normal playback speed.

9. The method according to claim 8, wherein said scaling step further comprises scaling said playback audio frequency by a multiplying factor of approximately $1/n$.

10. The method according to claim 9, wherein said scaling step further comprises scaling an amplitude of said frequency domain audio samples by factor of approximately n .

11. The method according to claim 1 wherein said storage medium is selected from the group consisting of a DVD, a magneto-optical disk, a magnetic hard disk, a video CD, and a solid state memory device.

12. The method according to claim 1 wherein said coded digital data has an MPEG format and said reading step further comprises decoding an MPEG bit stream to obtain said audio samples.

1 13. An apparatus for playing an audio track during video trick mode playback of a
2 video presentation, the method comprising:

3 a storage medium reader for reading digital data from a storage medium, said
4 [coded] digital data comprising audio programming corresponding to the video
5 presentation;

6 a decoder for decoding from a portion of said read digital data [comprising]
7 representative of said audio programming, a plurality of digital audio samples
8 corresponding to a selected portion of the video presentation;

9 a digital signal processor (DSP) comprising a fast Fourier transform (FFT)
10 processing element for transforming said digital audio samples from time domain to
11 corresponding frequency domain audio samples; and,

12 said digital signal processor comprising a scaling element for scaling a
13 playback audio frequency of said frequency domain audio samples in accordance
14 with said trick mode playback.

1 14. The apparatus according to claim 13, wherein at least one of said decoder
2 and said DSP comprises means for dropping selected ones of said time domain
3 audio samples at a rate approximately corresponding to a selected trick mode video
4 playback speed of said video presentation.

1 15. The apparatus according to claim 14, wherein said time domain audio
2 samples are dropped at an average rate of $(n-1)$ of every n samples, where n is
3 equal to the selected trick mode playback speed relative to a normal playback
4 speed.

1 16. The apparatus according to claim 15, wherein said scaling element scales
2 said playback audio frequency by a factor of approximately $1/n$.

1 17. The apparatus according to claim 16, wherein said scaling element further
2 comprises an amplitude adjusting element for scaling an amplitude of said frequency
3 domain audio samples by factor of approximately $1/n$.

1 18. The apparatus according to claim 13, wherein said DSP further comprises an
2 inverse FFT (IFFT) processing element for transforming said scaled frequency
3 domain audio samples to corresponding time domain digital audio samples for said
4 audio playback signal.

1 19. The apparatus according to claim 13, wherein at least one of said decoder
2 and said DSP repeats selected ones of said time domain audio samples at a rate
3 inversely proportional to a selected trick mode video playback speed of said video
4 presentation to produce a trick mode set of audio samples.

1 20. The apparatus according to claim 19, wherein said audio samples are
2 repeated at an average rate of about $1/n$ times, where n is equal to the selected trick
3 mode playback speed relative to a normal playback speed.

1 21. The apparatus according to claim 20, wherein said scaling element scales
2 said playback audio frequency by a multiplying factor of approximately $1/n$.

1 22. The apparatus according to claim 21, wherein said DSP further comprises an
2 amplitude scaling element for scaling said frequency domain audio samples by a
3 factor of approximately n .

1 23. The apparatus according to claim 13, wherein said storage medium is
2 selected from the group consisting of a DVD, a magneto-optical disk, a magnetic
3 hard disk, a video CD, and a solid state memory device.

1 24. The apparatus according to claim 13, wherein said coded digital data is an
2 MPEG format and said reading step further comprises decoding an MPEG bit stream
3 to obtain said audio samples.